

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS

1. (currently amended) A controller chip comprising:

a graphics engine operative to manage a memory, the graphics engine comprising an integral interface; and

a first in first out (FIFO) buffer coupled to the graphics engine, the FIFO buffer being accessible by a central processing unit (CPU) through the graphics engine, wherein the graphics engine receives commands from the CPU via the integral interface, and manages the FIFO buffer via the integral interface and wherein data transmittable to the FIFO buffer is transmitted via the integral interface.

2. (canceled)

3. (previously presented) The controller chip of claim 1 in which the FIFO buffer comprises a circular FIFO buffer.

4. (previously presented) The controller chip of claim 1 in which the FIFO buffer comprises a double buffer.

5. (previously presented) The controller chip of claim 1 in which the FIFO buffer comprises a triple buffer.

6. (original) The controller chip of claim 3 wherein the effective size of the FIFO buffer

as viewed by the CPU can be as large as the memory.

7. (previously presented) The controller chip of claim 1 which includes a checking mechanism for determining if the FIFO buffer needs to be emptied without utilizing the CPU.

8. (original) The controller chip of claim 7 wherein the checking mechanism comprises:

means for calculating the time required to fill the FIFO buffer;

means for determining if the used memory of the FIFO buffer, is below a predetermined amount based upon the time required to fill the FIFO buffer; and
means for preventing the FIFO buffer from filling if the used memory in the FIFO buffer is over the predetermined amount.

9. (original) The controller chip of claim 1 wherein the controller chip comprises a graphics controller chip.

10. (original) The controller chip of claim 9 wherein the engine comprises a graphics engine.

11. (currently amended) A system for providing a command stream in a computer system comprising:

a central processing unit (CPU);

a controller coupled to the CPU and including a graphics engine comprising an integral interface;

a memory coupled to the controller, the memory being managed by the controller; and

a first in first out (FIFO) buffer coupled to the controller, the ~~storage element~~ first in first out (FIFO) buffer being accessible by the CPU through the controller, wherein the controller

receives commands from the CPU via the integral interface, manages the storage element via the integral interface and writes the commands into the memory and wherein data transmittable to the FIFO buffer is transmitted via the integral interface.

12. (canceled)

13. (previously presented) The system of claim 11 in which the FIFO buffer comprises a circular FIFO buffer.

14. (previously presented) The system of claim 11 in which the FIFO buffer comprises a double buffer.

15. (previously presented) The system of claim 11 in which the FIFO buffer comprises a triple buffer.

16. (previously presented) The system of claim 11 in which the controller comprises a graphics controller.

17. (previously presented) The system of claim 11 wherein the effective size of the FIFO buffer can be as large as the memory.

18. (previously presented) The system of claim 11 which includes a checking mechanism for determining if the FIFO buffer needs to be emptied without utilizing the CPU.

19. (original) The system of claim 18 wherein the checking mechanism comprises:

means for calculating the time required to fill the FIFO buffer;

means for determining if the FIFO buffer is below a predetermined amount

based upon the time required to fill the buffer; and

means for preventing the FIFO buffer from filling if the FIFO buffer is above the predetermined amount.

20. (currently amended) A method for providing a command stream in a computer system, the computer system including a central processing unit (CPU), a controller coupled to the CPU, a memory coupled to the controller, the memory being managed by the controller, the method comprising the steps of:

(a) providing a first in first out (FIFO) buffer within the controller; and

(b) allowing the FIFO buffer to be accessible by the CPU via an integral interface of a graphics engine of the graphics controller wherein data transmittable to the FIFO buffer is transmitted via the integral interface.

21. (canceled)

22. (previously presented) The method of claim 20 in which the FIFO buffer comprises a circular FIFO buffer.

23. (previously presented) The method of claim 20 in which the FIFO buffer comprises a double buffer.

24. (previously presented) The method of claim 20 in which the FIFO buffer comprises a triple buffer.

25. (previously presented) The method of claim 20 in which the memory comprises a graphics memory.

26. (previously presented) The method of claim 20 wherein the effective size of the FIFO buffer as viewed by the CPU can be as large as the memory.

27. (previously presented) The method of claim 20 which includes the step of (c) determining if the FIFO buffer needs to be emptied without utilizing the CPU.

28. (original) The method of claim 27 wherein the determining step (c) further comprises:

(c1) calculating the time required to fill the FIFO buffer;

(c2) determining if the FIFO buffer is below a predetermined amount based upon the time required to fill the buffer; and

(c3) preventing the FIFO buffer from filling if the FIFO buffer is above the predetermined amount.